

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Date: September 30, 2004

In re Application of:

Examiner: Unknown

KARVINEN, et al.

Group Art Unit: Unknown

International Application No: PCT/FI2003/00251

Serial No. Not Yet Assigned

International Filing Date: 01 April 2003 (01.04.2003)

Filed: September 30, 2004

For: **A PHOTOCATALYST CONTAINING TITANIUM OXIDE, THE PRODUCTION
METHOD AND USE OF THE SAME**

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

An Information Disclosure Statement is submitted herewith pursuant to 37 C.F.R. 1.97-1.98. Please note the following particulars:

[NOTE: One only of items a, b, c, and d must be checked.]

- [XXX] a. The enclosed statement is being filed within three months of the filing date of a national application, or within three months of the date of entry into the national stage as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing date of a first Office Action on the merits, whichever event occurs last.
- [] b. The enclosed statement is being filed after a first action on the merits but before the mailing date of a final action under 37 C.F.R. 1.113, or a notice of allowance under 37 C.F.R. 1.311.
The enclosed statement is accompanied by [check one]:
[] i. a certification in part (e) below as specified in 37 C.F.R. 1.97(e), or
[] ii. a check in the amount required by 37 C.F.R. 1.17(p).
- [] c. The enclosed statement is being filed after the mailing date of a final action under 37 C.F.R. 1.113, or a notice of allowance under 37 C.F.R. 1.311, but before payment of the issue fee.
[] Certification report(e) below; and

Page 2

☐ a check in the amount as required by 1.17(p).

☐ d. The enclosed statement is being filed pursuant to 37 C.F.R. 1.97(i), for placement in the file.

☐ e. Certification [Check one] [Certification is required only if box (b)(i) or box (c) is checked.]

☐ I hereby certify that each item of information contained in the enclosed Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement,

or

☐ I hereby certify that no item of information in the enclosed Information Disclosure Statement herewith was cited in a communication from a foreign patent office in a counterpart foreign application, or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

or

☐ Appropriate certification is attached.

[XXX] f. If no check is enclosed and a fee is due in connection with this communication or if the check enclosed is insufficient, the Commissioner is authorized to charge any fee or additional fee due in connection with this communication to Deposit Account No. 14-0112.

[XXX] g. Copies of the documents are attached herewith with a completed Form PTO-1449.

or

☐ Copies of the documents are not attached as allowed under CFR 1.98(d)(1)(2). The earlier application is identified as:

or

10/509854

[] Copies of US Patents/Publications not attached
Page 3 Attorney Docket No. 26360U

as allowed in Official Gazette Aug. 5, 2003/
Vol. 1273, no. 1.

The Examiner is respectfully requested to cite the documents listed on the attached Form PTO-1449 in the next Office Action. In so doing, the Examiner is respectfully requested to initial in the space adjacent to the listing of each document on the Form PTO-1449, and return a copy of the initialed Form PTO-1449 with the next communication to Applicants, to confirm that these documents have been considered by the Examiner and made of record in this application.

If the Examiner has any questions or wishes to discuss this application, kindly telephone the undersigned at the below-listed number.

Respectfully submitted,
NATH & ASSOCIATES PLLC

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FORM PTO-1449

INFORMATION DISCLOSURE CITATIONAtty Docket
26360USerial No.
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September 30, 2004Group Art Unit
Unknown

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Issue Date	Name	Class	Sub-Class	Filing Date
	A1						
	A2						
	A3						

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Sub-Class	Translation
	A4	3439217 A1	30 Apr. 1986	DE			No
	A5	1 138 634 A1	04 Oct. 2001	EP			N/A
	A6	1 174 392 A1	23 Jan. 2002	EP			N/A
	A7	2002-029750 A	29 Jan. 2002	JP			No
	A8	0 675 086 A2	04 Oct. 1995	EP			N/A
	A9	99/42616 A1	02 Sep. 1999	WO			N/A
	A10	10-230169 A	02 Sep. 1998	JP			Abstract
	A11	0 924 164 A2	23 Jun. 1999	EP			N/A

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	A12	Jalava, J. et al., "Structural Investigation of Hydrous Titanium Dioxide Precipitates and Their Formation by Small-Angle X-ray Scattering", Ind. Eng. Chem. Res., Vol. 39, pp. 349-361, (2000).
	A13	Asahi, R. et al., "Visible-Light Photocatalysis in Nitrogen-Doped Titanium Oxides", Science, Vol. 293, pp. 269-271, (2001).
	A14	Muggli, D.S., et al., "Photocatalytic performance of sulfated TiO ₂ during oxidation of organics", Applied Catalysis B: Environmental, Vol. 32, pp. 181-194, (2001).
	A15	Elvers, B., et al. (Ed). Ullmann's Encyclopedia of Industrial Chemistry, 5 th Ed., Vol. A20, "Photography to Plastics, Processing", pp. 276-278, (1992).
	A16	Yamazaki, S. et al., "Effect of sulfate ions for sol-gel synthesis of titania photocatalyst", Applied Catalysis A: General, Vol. 210, pp. 94-102, (2001).

Examiner

Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP ' 609.
 Draw line through citation if not in conformance and not considered.
 Include copy of this form with next communication to Applicant.